

Bill of Materials

TI DESIGNS

Filename: BOM-SAT0027 Power Board Rev E4.xlsx
 Variant: SAT0027 REV E4
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IPNC Reference Design: Power Module

Designator	Quantity	Part Number	Description	Package Reference	Manufacturer	Value	Alternate Part Number	Alternate Manufacturer
C1	1	EEE-FC1V100R	CAP, AL, 10uF, 35V, +/-20%, 1.8 ohm, SMD	SMT Radial C	Panasonic	10uF		
C2, C11, C31	3	GRM155R61A222KA01D	CAP, CERM, 2200pF, 10V, +/-10%, X5R, 0402	0402	MuRata	2200pF		
C3	1	GRM31CR61E106KA12L	CAP, CERM, 10uF, 25V, +/-10%, X5R, 1206	1206	MuRata	10uF		
C4	1	C0603C104K5RACTU	CAP, CERM, 0.1uF, 50V, +/-10%, X7R, 0603	0603	Kemet	0.1uF		
C5	1	C1005X5R0J104K	CAP, CERM, 0.1uF, 6.3V, +/-10%, X5R, 0402	0402	TDK	0.1uF		
C6	1	GRM155R61A474KE15D	CAP, CERM, 0.47uF, 10V, +/-10%, X5R, 0402	0402	MuRata	0.47uF		
C7	1	C1005X7R1H472K	CAP, CERM, 4700pF, 50V, +/-10%, X7R, 0402	0402	TDK	4700pF		
C8	1	GRM1555C1H220JA01D	CAP, CERM, 22pF, 50V, +/-5%, C0G/NP0, 0402	0402	MuRata	22pF		
C9, C10, C45, C60, C61, C70, C71	7	LMK212BJ226MG-T	CAP, CERM, 22uF, 10V, +/-20%, X5R, 0805	0805	Taiyo Yuden	22uF		
C12	1	GRM3195C2A102JA01D	CAP, CERM, 1000pF, 100V, +/-5%, C0G/NP0, 1206	1206	MuRata	1000pF		
C13	1	EMVE101ADA220MHA0G	CAP, AL, 22uF, 100V, +/-20%, SMD	HA0	Nippon Chemi-Con	22uF		
C14, C15	2	C4532X7R2A225M	CAP, CERM, 2.2uF, 100V, +/-20%, X7R, 1812	1812	TDK	2.2uF		
C16, C18	2	1206C104JAT2A	CAP, CERM, 0.1uF, 100V, +/-5%, X7R, 1206	1206	AVX	0.1uF		
C17	1	06033C104JAT2A	CAP, CERM, 0.1uF, 25V, +/-5%, X7R, 0603	0603	AVX	0.1uF		
C19	1	GRM21BR71E224KA01L	CAP, CERM, 0.22uF, 25V, +/-10%, X7R, 0805	0805	MuRata	0.22uF		
C20	1	EMVY250ADA100ME55G	CAP, AL, 10uF, 25V, +/-20%, 1.8 ohm, SMD	E55	Nippon Chemi-Con	10uF		
C21	1	GRM155R61A473KA01D	CAP, CERM, 0.047uF, 10V, +/-10%, X5R, 0402	0402	MuRata	0.047uF		
C22, C23, C79	2	C4532X7R3D222K	CAP, CERM, 2200pF, 2000V, +/-10%, X7R, 1812	1812	TDK	2200pF		
C24	1	06031C681JAT2A	CAP, CERM, 680pF, 100V, +/-5%, X7R, 0603	0603	AVX	680pF		
C25, C26	2	C4532X5R1A476M	CAP, CERM, 47uF, 10V, +/-20%, X5R, 1812	1812	TDK	47uF		
C27	1	EEF-UD0J101R	CAP, AL, 100uF, 6.3V, +/-20%, 0.015 ohm, SMD	UD	Panasonic	100uF		
C28	1	0805YC474JAT2A	CAP, CERM, 0.47uF, 16V, +/-5%, X7R, 0805	0805	AVX	0.47uF		
C29	1	06033C101KAT2A	CAP, CERM, 100pF, 25V, +/-10%, X7R, 0603	0603	AVX	100pF		
C30	1	C1608C0G1E682J	CAP, CERM, 6800pF, 25V, +/-5%, C0G/NP0, 0603	0603	TDK	6800pF		
C32, C33, C38, C41, C46, C48, C54, C62, C64, C72	10	C1005X5R1A104K	CAP, CERM, 0.1uF, 10V, +/-10%, X5R, 0402	0402	TDK	0.1uF		
C39, C49, C51, C52, C53, C55, C65	7	LMK212BJ106KD-T	CAP, CERM, 10uF, 10V, +/-10%, X5R, 0805	0805	Taiyo Yuden	10uF		
C40	1	C1005C0G1E821J	CAP, CERM, 820pF, 25V, +/-5%, C0G/NP0, 0402	0402	TDK	820pF		
C42, C58, C68	3	C1005X7R1C103K	CAP, CERM, 0.01uF, 16V, +/-10%, X7R, 0402	0402	TDK	0.01uF		
C43, C59, C69	3	C0603C104M4RACTU	CAP, CERM, 0.1uF, 16V, +/-20%, X7R, 0603	0603	Kemet	0.1uF		
C44	1	JMK212BJ226MD-T	CAP, CERM, 22uF, 6.3V, +/-20%, X5R, 0805	0805	Taiyo Yuden	22uF		
C47, C86	1	C1005C0G1E102J	CAP, CERM, 1000pF, 25V, +/-5%, C0G/NP0, 0402	0402	TDK	1000pF		
C50	1	GRM1555C1H100JA01D	CAP, CERM, 10pF, 50V, +/-5%, C0G/NP0, 0402	0402	MuRata	10pF		
C56, C63, C66, C73	4	GRM155R61E102KA01D	CAP, CERM, 1000pF, 25V, +/-10%, X5R, 0402	0402	MuRata	1000pF		
C57, C67	2	06033D104KAT2A	CAP, CERM, 0.1uF, 25V, +/-10%, X5R, 0603	0603	AVX	0.1uF		
C74, C75, C76, C77, C78, C80, C83, C91	6	C1608X8R1E104K	CAP, CERM, 0.1uF, 25V, +/-10%, X8R, 0603	0603	TDK	0.1uF		
C81, C82	2	GRM155R60J225ME15D	CAP, CERM, 2.2uF, 6.3V, +/-20%, X5R, 0402	0402	MuRata	2.2uF		
C84, C85, C90	3	GRM21BR60J226ME39L	CAP, CERM, 22uF, 6.3V, +/-20%, X5R, 0805	0805	MuRata	22uF		
C87, C88	2	GRM31CR61A476KE15L	CAP, CERM, 47uF, 10V, +/-10%, X5R, 1206	1206	MuRata	47uF		
C89	1	GRM188R60J106ME47D	CAP, CERM, 10uF, 6.3V, +/-20%, X5R, 0603	0603	MuRata	10uF		
C92	1	C0603C105K8PACTU	CAP, CERM, 1uF, 10V, +/-10%, X5R, 0603	0603	Kemet	1uF		
C93	0	GRM1555C1H102JA01D	CAP, CERM, 1000pF, 50V, +/-5%, C0G/NP0, 0402	0402	MuRata	1000pF		
C94	1	08053D474KAT2A	CAP, CERM, 0.47uF, 25V, +/-10%, X5R, 0805	0805	AVX	0.47uF		
C95	1	GRM188R71E104KA01D	CAP, CERM, 0.1uF, 25V, +/-10%, X7R, 0603	0603	MuRata	0.1uF		
C96, C100, C101	3	GRM155R61A105KE15D	CAP, CERM, 1uF, 10V, +/-10%, X5R, 0402	0402	MuRata	1uF		
C97, C98, C103, C104	4	GRM155R61C104KA88D	CAP, CERM, 0.1uF, 16V, +/-10%, X5R, 0402	0402	MuRata	0.1uF		
C99, C105, C106	3	C1608X5R1A106M	CAP, CERM, 10uF, 10V, +/-10%, C0G/NP0, 0603	0603	TDK	10uF		
C102	1	GRM1555C1E470JA01D	CAP, CERM, 47pF, 25V, +/-5%, C0G/NP0, 0402	0402	MuRata	47pF		
D1	1	SMAJ58A	Diode, TVS, 58V, 400W, 4.3A, 5%, SMT		Littelfuse			
D2	1	MURS140-13-F	Diode, Ultrafast, 400V, 1A, SMB	SMB	Diodes Inc.	1.25V		
D3	1	BAS16-7-F	Diode, Ultrafast, 75V, 0.3A, SOT-23	SOT-23	Diodes Inc.	1.125V		
D4	1	B540C-13-F	Diode, Schottky, 40V, 5A, SMC	SMC	Diodes Inc.	0.55V		
D5	1	BAT54S-7-F	Diode, Schottky, 30V, 0.2A, SOT-23	SOT-23	Diodes Inc.	0.65V		
D6	1	TLV431ACDBZR	IC VREF SHUNT PREC ADJ SOT-23-3	TO-236-3, SC-59, SOT-23-3	Texas Instruments			
D9	1	1SS35TE-17	DIODE SWITCHING 80V 100MA SOD323	SC-90, SOD-323F	Rohm Semiconductor	1.2V @ 100mA		
DIPSW1	1	BPA02SB	Switch, SPST, 2Pos, Side Actuated, Dip-switch, SMT		C&K Components			
J1	1	PJ-052D	Connector, Barrel Power Jack, 1.3mm x 3.8mm, w/Power Switch, TH		CUI Inc			
J2	1	TB-F022C00	OO 2.5MM 90 SERIES		Onnatek			
J3	1	BM08B-SRSS-TB(LF)(SN)	Female Connector, 8 Pos, 1mm Pitch, Singel Row, SMT		JST Sales America Inc			
J4	1	FW-25-01-G-D-630-115	.050" Flex Stack, Flexible Micro Board Stacker, Through-hole		Samtec			
J5	1	ETB63070H200Z	Edge Connector, 7 PIN		ECE			
J6	1	SJ-3523-SMT-TR	CONN AUDIO JACK 3.5MM STEREO SMD		CUI Inc			

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J7	1	BM04B-SRSS-TB(LF)(SN)(P)	Connector, 4Pos, 1.00mm Pitch, Shrouded, SMT		JST Sales America Inc			
J8	1	BM02B-SRSS-TB(LF)(SN)(P)	Connector, 2Pos, Female, Shrouded, 1mm Pitch, SMT		JST Sales America Inc			
J9	1	0533980371	Plug, SMT, Vertical, 1.25mm, 1x3	0533980371	Molex	1x3		
L1	1	VLC6045T-4R7M	Inductor, Shielded, Ferrite, 4.7uH, 3.8A, 0.027 ohm, SMD		TDK	4.7uH		
L2	1	744042100	Inductor, Shielded Drum Core, Ferrite, 10uH, 1A, 0.12 ohm, SMD	WE-TPC-M1	Würth Elektronik eiSos	10uH		
L3	1	ELL-6RH1R0M	Inductor, Shielded Drum Core, Ferrite, 1uH, 3A, 0.019 ohm, SMD	ELL6RH	Panasonic	1uH		
L6, L8, L9	3	VLC6045T-6R8M	Inductor, Shielded, Ferrite, 6.8uH, 3A, 0.041 ohm, SMD		TDK	6.8uH		
L7	1	LPS3015-152MLB	Inductor, Shielded Drum Core, Ferrite, 1.5uH, 1.7A, 0.1 ohm, SMD	LPS3015	Coilcraft	1.5uH		
L10, L11	2	GLFR1608T220M-LR	INDUCTOR 22UH 50MA 20% 0603	0603 (1608 Metric)	TDK Corporation			
L12, L13	2	MP21608S601A	FERRITE CHIP BEAD 600 OHM SMD	0603 (1608 Metric)	TDK Corporation			
L14	1	GLFR2012T100M-LR	INDUCTOR 10UH 100MA 20% 0805	0805 (2012 Metric)	TDK Corporation			
L15, L16, L17	3	BLM18PG181SN1D	FILTER CHIP 180 OHM 1500MA	0603 (1608 Metric)	Murata Electronics North America			
L18	1	MSS5121-332MLB	Inductor, Shielded Drum Core, Ferrite, 3.3uH, 2A, 0.07 ohm, SMD	MSS5121	Coilcraft	3.3uH		
LED1, LED2	2	LTST-S326KGJSKT	LED, Green/Yellow, 20mA, 2V, 130° Angle Right Angle, 3.00mm x 2.00mm, SMT		Liteon			
Q1, Q2, Q4, Q14	4	CSD16409Q3	MOSFET, N-CH, 25V, 60A, SON 3.3x3.3mm	SON 3.3x3.3mm	Texas Instruments	25V		
Q3	1	FDMC86240	MOSFET, N-CH, 150V, 16A, MLP08S	MLP08S	Fairchild Semiconductor	150V		
Q5, Q6, Q7	3	DTC123JETL	TRANS NPN 50V 100MA SOT-416	SC-75, SOT-416	Rohm Semiconductor			
Q8	1	2SK3019TL	SILICON N-CHANNEL MOS FET HIGH SPEED POWER SWITCHING	SC-75, SOT-416	Rohm Semiconductor			
Q9, Q10, Q11, Q12, Q13	5	2SC4713KT146S	TRANS NPN 6V 50MA SOT-346	TO-236-3, SC-59, SOT-23-3	Rohm Semiconductor			
Q15, Q16	2	2N7002KW	MOSFET, N-CH, 60V, 0.31A, SOT-323	SOT-323	Fairchild Semiconductor	60V		
R1	1	CRM0805-FW-R050ELF	RES, 0.05 ohm, 1%, 0.25W, 0805	0805	Bourns	0.05		
R2, R5, R24	3	CRCW0402154KFKE	RES, 154k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	154k		
R3	1	CRCW0402124KFKE	RES, 124k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	124k		
R4	1	CRCW040222K1FKE	RES, 22.1k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	22.1k		
R6	1	CRCW080524K9FKEA	RES, 24.9k ohm, 1%, 0.125W, 0805	0805	Vishay-Dale	24.9k		
R7	1	CRCW080559K0FKEA	RES, 59.0k ohm, 1%, 0.125W, 0805	0805	Vishay-Dale	59.0k		
R8	1	CRCW080580K6FKEA	RES, 80.6k ohm, 1%, 0.125W, 0805	0805	Vishay-Dale	80.6k		
R9	1	CRCW080590R9FKEA	RES, 90.9 ohm, 1%, 0.125W, 0805	0805	Vishay-Dale	90.9		
R10	1	CRCW080539K0JNEA	RES, 39k ohm, 5%, 0.125W, 0805	0805	Vishay-Dale	39k		
R11, R12	2	CRCW060310R0FKEA	RES, 10.0 ohm, 1%, 0.1W, 0603	0603	Vishay-Dale	10.0		
R13	1	CRCW06031K00JNEA	RES, 1.0k ohm, 5%, 0.1W, 0603	0603	Vishay-Dale	1.0k		
R14	1	CRCW0603402R2FKEA	RES, 402 ohm, 1%, 0.1W, 0603	0603	Vishay-Dale	402		
R15	1	RC0603FR-072KL	RES, 2.00k ohm, 1%, 0.1W, 0603	0603	Yageo America	2.00k		
R16	1	CSR1206FKR330	RES, 0.33 ohm, 1%, 0.5W, 1206	1206	Stackpole Electronics Inc	0.33		
R17	1	CRCW08051K00JNEA	RES, 1.0k ohm, 5%, 0.125W, 0805	0805	Vishay-Dale	1.0k		
R18	1	CRCW080510K0JNEA	RES, 10k ohm, 5%, 0.125W, 0805	0805	Vishay-Dale	10k		
R19	1	CRCW120620R0FKEA	RES, 20.0 ohm, 1%, 0.25W, 1206	1206	Vishay-Dale	20.0		
R20, R99, R101	3	RC0603FR-0710KL	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	Yageo America	10.0k		
R21, R28, R29, R30, R36	2	CRCW08050000Z0EA	RES, 0 ohm, 5%, 0.125W, 0805	0805	Vishay-Dale	0		
R22	1	RT0603DRE0744K2L	RES, 44.2k ohm, 0.5%, 0.1W, 0603	0603	Yageo America	44.2k		
R23	1	CRCW060314K3FKEA	RES, 14.3k ohm, 1%, 0.1W, 0603	0603	Vishay-Dale	14.3k		
R25, R26, R27	1	ERJ-8GEY0R00V	RES, 0 ohm, 5%, 0.25W, 1206	1206	Panasonic	0		
R32	1	CRCW0402665KFKE	RES, 665k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	665k		
R33, R45	2	CRCW0402287KFKE	RES, 287k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	287k		
R34	1	CRCW0402604KFKE	RES, 604k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	604k		
R35	1	CRCW0402118KFKE	RES, 118k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	118k		
R39, R103, R104, R105	4	CRCW04021K00FKE	RES, 1.00k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	1.00k		
R40, R48	2	CRCW040249R9FKE	RES, 49.9 ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	49.9		
R41, R44, R49, R53, R55, R56, R57, R58, R82, R83, R86, R87, R116	13	CRCW040210K0FKE	RES, 10.0k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	10.0k		
R42	1	CRCW04028K25FKE	RES, 8.25k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	8.25k		
R43, R122	2	CRCW040210R0FKE	RES, 10.0 ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	10.0		
R46	1	CRCW040251K1FKE	RES, 51.1k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	51.1k		
R47, R51	2	CRCW0402750R2FKE	RES, 750 ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	750		
R50, R54	2	CRCW040215K0FKE	RES, 15.0k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	15.0k		
R52, R140	2	RR1220Q-49R9-D-M	RES, 49.9 ohm, 0.5%, 0.1W, 0805	0805	Susumu Co Ltd	49.9		
R59, R113, R117	3	CRCW0402100KFKE	RES, 100k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	100k		
R60, R61, R63, R73, R74, R75, R141	7	CRCW04021K00JNE	RES, 1.0k ohm, 5%, 0.063W, 0402	0402	Vishay-Dale	1.0k		
R62, R67, R68, R69, R70	5	CRCW0402220RJNE	RES, 220 ohm, 5%, 0.063W, 0402	0402	Vishay-Dale	220		
R64, R65	2	RC1206FR-07330RL	RES, 330 ohm, 1%, 0.25W, 1206	1206	Yageo America	330		
R66	1	CRCW04020000Z0ED	RES, 0 ohm, 5%, 0.063W, 0402	0402	Vishay-Dale	0		
R71, R72, R76	2	CRCW040247K0JNE	RES, 47k ohm, 5%, 0.063W, 0402	0402	Vishay-Dale	47k		
R77, R80	2	CRCW060375R0FKEA	RES, 75.0 ohm, 1%, 0.1W, 0603	0603	Vishay-Dale	75.0		
R78, R79, R123, R135	2	CRCW060320K0FKEA	RES, 20.0k ohm, 1%, 0.1W, 0603	0603	Vishay-Dale	20.0k		
R81	0	RG1608P-221-B-T5	RES, 220 ohm, 0.1%, 0.1W, 0603	0603	Susumu Co Ltd	220		
R84, R120, R127, R128, R129, R130, R131, R132, R136, R137	7	CRCW06030000Z0EA	RES, 0 ohm, 5%, 0.1W, 0603	0603	Vishay-Dale	0		
R85	1	RC0603JR-072K2L	RES, 2.2k ohm, 5%, 0.1W, 0603	0603	Yageo America	2.2k		
R88, R91, R93	0	CRCW060310K0FKEA	RES, 10.0k ohm, 1%, 0.1W, 0603	0603	Vishay-Dale	10.0k		
R89, R90, R96	1	RC0603FR-0747KL	RES, 47.0k ohm, 1%, 0.1W, 0603	0603	Yageo America	47.0k		
R92	1	RC0603FR-0715KL	RES, 15.0k ohm, 1%, 0.1W, 0603	0603	Yageo America	15.0k		
R94, R95	1	RC0603FR-071KL	RES, 1.0k ohm, 5%, 0.1W, 0603	0603	Yageo America	1.0k		
R97	1	RC0603FR-072K2L	RES, 2.2k ohm, 1%, 0.1W, 0603	0603	Yageo America	2.2k		
R98, R106, R125	2	RC0603FR-0720KL	RES, 20.0k ohm, 1%, 0.1W, 0603	0603	Yageo America	20.0k		
R100	1	CRCW06032K20JNEA	RES, 2.2k ohm, 5%, 0.1W, 0603	0603	Vishay-Dale	2.2k		
R102	1	RC0603FR-071ML	RES, 1.00Meg ohm, 1%, 0.1W, 0603	0603	Yageo America	1.00Meg		
R107	1	CRCW08055R10JNEA	RES, 5.1 ohm, 5%, 0.125W, 0805	0805	Vishay-Dale	5.1		
R108, R109	2	CRCW06034K02FKEA	RES, 4.02k ohm, 1%, 0.1W, 0603	0603	Vishay-Dale	4.02k		
R110	1	CRCW04026K81FKE	RES, 6.81k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	6.81k		
R111	1	CRCW040213K9FKE	RES, 133k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	133k		
R112	1	CRA2512-FZ-R020ELF	RES, 0.02 ohm, 1%, 3W, 2512	2512	Bourns	0.02		
R114, R118	2	CRCW040232K4FKE	RES, 32.4k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	32.4k		
R115	1	CRCW040230K9FKE	RES, 30.9k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	30.9k		
R119	1	CSR1206FK10L0	RES, 0.01 ohm, 1%, 0.5W, 1206	1206	Stackpole Electronics Inc	0		
R121, R124, R126	0	CRCW12060000Z0EA	RES, 0 ohm, 5%, 0.25W, 1206	1206	Vishay-Dale	0		
R138	0	CRCW04024K99FKE	RES, 4.99k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	4.99k		
R142	1	CRCW04026K65FKE	RES, 66.5k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	66.5k		
R143	1	CRCW04024K64FKE	RES, 46.4k ohm, 1%, 0.063W, 0402	0402	Vishay-Dale	46.4k		
SW1	1	TL3330AF260QG	Switch, Push Button, Side Mount, SPST, 0.05A @12V, SMT		E-Switch			
T1	1	ACM7060-701-2PL-TL	TDK - ACM7060-701-2PL - CHIP INDUCTOR, 4A	Horizontal, 4 J-Lead	TDK Corporation			

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T2	1	ACM4532-601-2P-T001	CHOKE COMMON MODE 600 OHM SMD	1812 (4532 Metric), 6 Lead	TDK Corporation			
T3	1	POE13P-50L	POE Transformer 5.0V 2.6A		Coilcraft			
TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP20, TP21, TP23	20	5001	Test Point, TH, Miniature, Black	Keystone5001	Keystone	Black		
U1, U3, U6	3	TPS2419D	IC, N+1 and Oring Power Rail Controller W/ Enable	SO-8	TI	TPS2419D		
U2	1	TPS54339DDA	4.5V to 23V Input, 3-A Synchronous Step-Down SWIFT Converter, DDA0008E	DDA0008E	Texas Instruments			
U4	1	TPS23753APW	IEEE 802.3 PoE INTERFACE AND CONVERTER CONTROLLER WITH ENHANCED ESD IMMUNITY, PW0014A	PW0014A	Texas Instruments			
U5	1	FODM121	Full Pitch Mini-Flat Package Transistor Output Optocoupler	FOD121	Fairchild Semiconductor			
U7	1	TPS3839G33DQNR	IC LP SUPERVISRY CIRCUIT 4X2SON		Texas Instruments			
U8, U9	2	TPS3897ADRYR	IC SUPERVISOR MPU ADJ 6SON		Texas Instruments			
U11, U13, U14	3	TPS5432DDA	IC REG BUCK SYNC ADJ 3A 14QFN		Texas Instruments			
U12	1	TPS63036YFGR	IC REG BUCK BST SYNC ADJ 8WCSP		Texas Instruments			
U15, U16	2	SN74AVC2T45DCUR	IC BUS TRANSCVR TRI-ST 2B 8VSSOP		Texas Instruments			
U17	1	SN65HVD11DR	IC RS485 TRANSCEIVER 3.3V 8-SOIC		Texas Instruments			
U18, U19, U20	3	TCMT1107	OPTOCPL PHOTOTRANS 1CH 160% 4SOP	4-SOIC (0.170", 4.40mm)	Vishay Semiconductor Opto D			
U21	1	OPA360AIDCK	IC VIDEO AMP 3V SC70-6		Texas Instruments			
U22	1	OPA2357AIDGSR	IC OPAMP VFB R-R 100MHZ 10MSOP	10-TFSOP, 10-MSOP (0.118", 3.00mm Width)	Texas Instruments			
U23	1	LMV722IDGKR	IC OPAMP GP R-R 10MHZ DUAL 8MSOP	8-TSSOP, 8-MSOP (0.118", 3.00mm Width)	Texas Instruments			
U24	1	BQ24170RGYT	IC LH-ON/POL CHARGE MGMT 24VQFN	24-VFQFN Exposed Pad	Texas Instruments			

Notes:

Unless otherwise noted in the Alternate PartNumber and/or Alternate Manufacturer columns, all parts may be substituted with equivalents.

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